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DEPARTMENT OF THE ARMY U. S. Army Corps of Engineers Washington, DC 20314-1000

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Engineer Manual No. 1110-2-1202

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Engineering and Design ENVIRONMENTAL ENGINEERING FOR DEEP-DRAFT NAVIGATION PROJECTS

- 1. <u>Purpose</u>. This manual provided guidance for incorporating environmental considerations in the planning, engineering and design, as well as, construction, operation and maintenance of deep-draft navigation projects.
- 2. Applicability. This manual applies to all HQUSACE/OCE and field operating activities (FOAs) having responsibility for the engineering and design of civil works projects.
- 3. <u>Discussion</u>. Deep-draft navigation projects involve development of large channel systems with attendant turning basins, anchorages, and pier and wharfing facilities. Construction and maintenance of deep-draft navigation projects usually involve dredging large volumes of bottom sediment and resultant changes in bottom geometry of the water body. Environmental considerations associated with these actions include those related to dredging and disposal of dredged material, and the possible alteration of water circulation patterns, salinity concentrations, water levels, flushing rates, and habitats. This manual provides guidance on incorporating environmental considerations as part of deep-draft project design and construction, as well as guidance for incorporating project features for attaining environmental quality objectives.

FOR THE COMMANDER:

Anthe E. Williams

Colonel, Corps of Engineers

Chief of Staff